



CURRENT AFFAIRS WEEKLY



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- Disclaimer -

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

CURRENT AFFAIRS ANALYST

WEEK-2 (JUNE, 2019)

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SECTION: A (MAINS)

CURRENT AFFAIRS

IS INDIA'S GROWTH STORY PLATEAUING?

CONTEXT

- Official estimates released on May 31, show GDP growth slowed to a five-year low of 6.8% in 2018-19, even as the unemployment rate rose to a 45-year high of 6.1% in 2017-18.
- The economy is struggling with an investments and a manufacturing slowdown, rural distress, unremunerative farm incomes, stagnating exports, a banking and financial mess and a jobs crisis.

• ABOUT:

- The top economic priority for the new government ought to be credible course correction in its attitude to policy — its formulation, articulation and the setting of goals.
- What is critically important is to an overhaul of labour and land policies and a much-needed manufacturing push, 'Make In India', for absorbing the slack from the farms.

• BACKGROUND:

- According to book "The Lost Decade 2008-18: How India's Growth Story Devolved in Growth without a Story", for a large economy like India, what was needed was to do sequencing of reforms, which was not done and, worse, a measure such as the demonetization was introduced, jolting the economy.
- Today, India's GDP is growing at a world beating rate, but little on the ground suggests that people are actually feeling better off.
- Accelerating the rate of growth is not sufficient. What sets apart successful economies from the unsuccessful is the duration for which fast growth is sustained.
- India's economy was thriving and GDP growth was at an impressive 8.8 per cent before the global financial meltdown in 2008.
- Sequence of events prove that in the decade that followed each time the country's economy came close to returning to that growth trajectory, political events derailed it.

• ANALYSIS

- The last ten years have shown that half-baked, illthought-out measures produce uncertain results.
- Be it the land acquisition law, the national food security law, demonetization or GST, the big bang economic reforms agenda has plateaued.
- India must rebuild consensus for a steady stream of reforms and revive the spirit of 1991.

Is India shining?

• The renewed plan to make India shine had the same blind spot — the farm sector, employer to

the bulk of India's poor, and in desperate need of structure reforms, received inadequate attention.

Is there a policy paralysis here?

- There is no policy paralysis. On the contrary, decision making was speedy. But it was poor of quality.
- The ill-informed idea of demonetization and the half-baked GST roll out demonstrated the growing disconnect between policy tools and objectives.
- The economy could have recovered and returned to the high-growth path with bold reforms, but the policy response was feeble.

What has been, and can be, the RBI's monetary policy in aiding growth story

- India has reported top gross domestic product (GDP) growth rates across the world. It is also known as one of the four most powerful emerging market countries, collectively part of the BRICs which contain Brazil, Russia, India, and China.
- The International Monetary Fund (IMF) and World Bank have highlighted India in several reports showing its high rate of growth.
- In April 2019, the World Bank projected India's GDP growth would expand by 7.5% in 2020. Also in April 2019, the IMF showed an expected GDP growth rate of 7.3% for 2019 and 7.5% for 2020.
- Both projections have India with the highest expected GDP growth in the world over the next two years.
- These growth rates make the role of the Reserve Bank of India increasingly important as the country's total GDP moves higher.
- India is a top 10 nation for GDP overall but its numbers fall far behind the world's superpowers in the United States and China.

RBI's Role

- As with all economies, the central bank plays a key role in managing and monitoring the monitory policies affecting both commercial and personal finance as well as the banking system.
- As GDP moves higher on the world rankings the RBI's actions will become increasingly important.
- In April 2019 the RBI made the monetary policy



decision to lower its borrowing rate to 6%. The rate cut was the second for 2019 and is expected to help impact the borrowing rate across the credit market more substantially.

- Prior to April, credit rates in the country have remained relatively high, despite the central bank's positioning, which has been limiting borrowing across the economy.
- The central bank must also grapple with a slightly volatile inflation rate that is projected at 2.4% in 2019, 2.9% to 3% in the first half of 2020, and 3.5% to 3.8% in the second half of 2020.
- As one of the fastest growing emerging market countries in the world, India and its central bank have several unique challenges ahead that will require nimble navigation from the RBI.
- With the Indian economy steadily accounting for a greater share of the global economy, it is expected that the RBI will gain greater attention from world leaders while also growing in stature as one of the world's most-watched central banks.

On Fiscal fronts - is there a job deficit orientation on policy matters?

- According to a research, the main reason for the worsening correlation between growth and jobs was a mismatch between skills and 'good jobs.
- The share of the so-called goods jobs that broadly includes formal employment with regular pay accounted for only 17 per cent of the country's 467 million workforce.
- The World Bank, in its publication South Asia Economic Focus, Spring 2018: Jobless Growth?, says that over the long-term, India has been creating 7,50,000 new jobs for every one per cent rise in gross domestic product (GDP); at an average of 7% growth, India should be creating at least 5.25 million jobs.
- Assessing real job trends cannot be done with point-to-point data of the type the government puts out once in a while, for the choice of base year matters.
- The Census, which is the gold standard in job counts, happens once in 10 years; the National Sample Survey Office's surveys happen once in five years, and the Labour Bureau's employment surveys, which use methodologies similar to CMIE's, also happen with large time lags. There hasn't been one since 2015-16.
- This brings us to the conclusion: if we want to fix our jobs problem, we must first get our hands on

Practice Question

the right high-frequency data. Without this, we can't even define the nature of our jobs problem.

Link between growth and jobs

- In the 1990s, the employment elasticity in India was nearly 0.4. This number measures how much a given rise in growth impacts jobs. At 0.4, a one per cent rise in GDP growth gives us a 0.4% rise in employment; 5% growth gives jobs a 2% boost.
- Now, this elasticity is down to 0.2 or lower. This means, for every percentage rise in growth, we get only a 0.2% impact on employment.
- Secondly, this falling employment elasticity is partly the result of large-scale substitution of labour with capital and automation. This is easy in a world with surplus capital, and especially in a country with restrictive labour laws.

The remedies

- Improvement in labour market information system. This way, emerging demand for skills are spotted quickly and the necessary training and certifications for the same are created quickly.
- This calls for an agile public-private partnership in capturing demand for skills and following through with quick investments in skill-building to match demand with supply.
- India need labour market reforms. Some good moves have been seen over the last few years, with the **Apprentices Act** being modified to make it more attractive for employers to hire young workers, and the extension of fixed-term labour contracts from textiles to all industries in the last budget.
- This is good, but not good enough. The "regulatory cholesterol", is still too high.
- The key to employment growth is not the big company or factory that employs thousands of workers, but medium-scale units.
- The enterprises-to-jobs multiple is highest for medium-scale units. India needs to nurture and expand its equivalent of the German Mittelstand. This can't happen without deep changes to labour laws and access to credit.
- There may still be jobs in light manufacturing (apparel, leather, cell phone assembling, et al.), but manufacturing as a whole is automating in a big way, and won't directly create jobs.
- Smart urbanization is key. The link between good urbanization and jobs growth is positive, and unless India's urbanization is concentrated in narrower areas and serviced by good infrastructure, job creation will be sub-optimal.
- Indian economy has huge potential to change the composition of growth such that our growth would be sustainable even without subsidies. Critically evaluate the challenges put forth by one dimensional growth story.

GS SCORE

SELF-SUFFICIENCY IN SOLAR MANUFACTURING

CONTEXT

- India has made significant progress in creating capacity for solar power generation in the last few years but still it relies on China for the solar equipment.
- India imports 90% of its solar cell and module requirements from China, Malaysia and Taiwan.

\odot **ABOUT**:

Solar Energy:

- Solar radiation can be converted into both heat and electricity using technologies - solar thermal and solar photovoltaics respectively.
- Conversion into electricity can be done either directly using photovoltaics (PV) or indirectly using concentrated solar power, or a combination. Concentrated solar power systems use lenses or mirrors and tracking systems to focus a large area of sunlight into a small beam. Photovoltaic cells convert light into an electric current using the photovoltaic effect.
- Ministry of New and Renewable Energy (MNRE) is the nodal agency of Government of India for implementing solar projects.

• BACKGROUND:

- India is blessed with plenty of sunlight for most of the year yet it is energy deficient.
- It should have taken a lead in solar panel manufacture to generate solar energy long ago. Despite the new policy focus on solar plant installation, India is still not a solar panel manufacturer.
- Just as India has had no overall industrial policy since economic reforms began, there is no real plan in place to ensure solar panel manufacture.
- The share of all manufacturing in GDP was 16% in 1991; it remained the same in 2017. The solar power potential offers a manufacturing opportunity. The government is a near monopolistic buyer.
- India is regarded by the global solar industry as one of the most promising markets. Hence the low-cost Chinese importers have boosted their ambitions to develop and supply their own solar technology to India. Imports, mostly from China, accounted for 90% of 2017 sales, up from 86% in 2014.

• ANALYSIS:

Why does India want to be self-sufficient in solar power generation?

- **Provides energy security:** In addition to the existing conventional sources of energy, this relatively new source solar energy will meet the rising energy demand of the huge and continuously rising country's population. It will help to ensure uninterrupted availability of energy, both electricity and heat.
- **Renewable source of energy:** The solar energy is inexhaustible unlike the fossil fuels coal, petroleum and natural gas that are finite.
- Addresses climatic change: The solar energy is also a non-polluting source of energy. It does not emit any of the greenhouse gases while producing electricity. Using this energy will help to reduce the global warming effect in our planet.
- Blessed geographical location: Tropic of Cancer passes through the center of India making half of country lie in sunshine abundant tropical region. India receives peak solar radiation for 300 days, amounting 2300-3,000 hours of sunshine equivalent to above 5,000 trillion kWh.
- **Low running cost:** Once the installation of solar panels is done, there is almost zero running cost for the power generation. The little cost incurred is for the maintenance. This makes it affordable for the poor sections of the society.
- **Growth of manufacturing sector:** Making of solar panels for converting solar energy and batteries for storing the solar energy will boost the manufacturing sector of the country. This will increase the GDP share of the manufacturing sector. It will provide employment opportunities to our youths and save our foreign exchange reserves.

What are the efforts taken by the government?

- National Solar Mission: It is an initiative of Central government and state government to establish India as a global leader in solar energy. Initially, it set a target of 20GW by 2022 but later this target was revised to 100GW.
- Indian Renewable Energy Development Agency

Limited (IREDA): It is a Mini Ratna Government of India Enterprise under the administrative control of Ministry of New and Renewable Energy (MNRE). IREDA was established as a Non-Banking Financial Institution in 1987 and is engaged in promoting, developing and extending financial assistance for setting up projects relating to new and renewable sources of energy and energy conservation with the motto: "ENERGY FOR EVER".

- National Institute Of Solar Energy (NISE): It is an autonomous institution of MNRE. It is the apex National R&D institution in the field Solar Energy. The Government has converted 25 year old Solar Energy Centre (SEC) under MNRE to this autonomous institution in 2013. The institute is involved in demonstration, standardization, interactive research, training and testing solar technologies and systems.
- Solar park scheme: MNRE along with its affiliate Solar Energy Corporation (SECI) have launched Solar Park scheme to encourage the construction of 50 solar parks that can generate electricity between 500 MW and 1000 MW. The Solar Parks/ Ultra Mega Solar Power Projects will be set up across various states for five years from 2014-15 to 2019-20.
- Sustainable Rooftop Implementation of Solar Transfiguration of India (SRISTI): It is part of the larger grid-connected Rooftop Solar (RTS) power programme. It aims to bring discoms to the forefront in the implementation of rooftop solar projects by providing them financial support which will be linked to their performance in facilitating the deployment of RTS. The government has set a target to install 40,000 MW of rooftop solar power capacity by 2022.
- Suryamitra Skill Development Programme: This programme is implemented by NISE. It aims to develop the skills of youth, considering the opportunities for employment in the growing Solar Energy Power project's installation, operation & maintenance in India and abroad. It is also designed to prepare the candidates to become new entrepreneurs in Solar Energy sector.

How successful are the efforts taken by government

- The government has given a new fillip to solar power installation in recent years. The unit costs of solar power have fallen, and solar energy has become increasingly competitive with alternative sources of energy.
- India expanded its solar generation capacity eight

times from 2,650 MW in 2014 to over 20 GW in 2018 and 28.18 GW in 2019.

• The government had an initial target of 20 GW of solar capacity by 2022, which was achieved four years ahead of schedule. In 2015, the target was raised to 100 GW of solar capacity by 2022.

Why is India importing equipment from China?

- **Core competence**: The six largest Chinese manufacturers had core technical competence in semiconductors before they turned to manufacturing solar cells at the turn of the century. When the solar industry in China began to grow, Chinese companies already possessed the know-how. Indian companies had no learning background in semiconductors when the solar industry in India began to grow from 2011.
- Government Policy: The Chinese government has subsidized land acquisition, raw material, labour and export, among others. None of this is matched by the Indian government. Perhaps even more important is commitment by the government to procure over the long run — without that the investment in building up the design and manufacturing for each of the four stages of production of solar power equipment would come to nought.
- **Capital**: The cost of debt in India (11%) is highest in the Asia-Pacific region, while in China it is about 5%.

Way forward:

- Central and State governments need to support semiconductor production as part of a determined industrial policy to develop this capacity for the future.
- Strong financial measures are required to finance the solar projects, innovative steps like green bonds, institutional loans and clean energy fund can play a crucial role.
- Easy availability of credit will help the solar companies to expand their business in solar power.
- There should be promotion of research and development in renewable energy sector, especially in storage technology.
- Proper mechanism should be provided to tackle China's dumping of solar equipments like increasing the import duty.

What is domestic content issue?

• The solar mission mandated that cells and modules for solar PV projects based on crystalline silicon to be manufactured in India. That accounts to over 60% of total system costs. For solar thermal, the mission mandated 30% project to have domestic content.

- A vigorous controversy emerged between power project developers and solar PV equipment manufacturers. The former prefers to source modules by accessing highly competitive global market to attain flexible pricing, better quality, predictable delivery and use of latest technologies. The latter prefers a controlled environment to force developers to purchase modules from a small, albeit growing, group of module manufacturers in India.
- US Trade Representative (USTR) has filed a complaint at World Trade Organization challenging India's domestic content requirements in this Mission, citing discrimination against US exports and that industry in US which has invested hugely will be at loss.
- US insists that such restrictions are prohibited by WTO. India however claims that it is only an attempt to grow local potential and to ensure self-sustenance and reduce dependence. This case was won by USTR as it violated the free trade principle of WTO.

Practice Question

• With the ever rising demand for electricity, the new and renewable solar energy can prove to be blessing for our country. Discuss what efforts have been taken by our government in this field, and how far they have been successful.

NATIONAL EDUCATION POLICY

CONTEXT

- The draft of New National Education Policy has been recently submitted by the Committee led by Dr. Kasturirangan on education policy.
- The draft has been shared by the ministry of human resource development (MHRD) for public comment.
- There were protests in many parts of the country mainly from Tamil Nadu regarding a clause in the draft recommending mandatory Hindi teaching in all schools as one of the three-language formula introduced from class 1. Consequently the committee has removed this clause from the draft.

• ABOUT:

- The National Policy on Education (NPE) is a policy formulated by the Government of India to promote education amongst India's people. The policy covers elementary education to colleges in both rural and urban India.
- The first NPE was promulgated in 1968 by the government of Prime Minister Indira Gandhi, and the second by Prime Minister Rajiv Gandhi in 1986.
- Most recently the government of India has appointed a new committee under K. Kasturirangan to prepare a Draft for the new National Education Policy in 2017 for the next two decades.

• BACKGROUND:

- National Policy on Education, 1968:
 - This first policy on education was based on the recommendations of the Kothari Commission (1964-1966).
 - The policy aimed at compulsory education for all children upto the age of 14 years and better training and qualification of teachers.
 - ➤ The policy called for focus on learning of regional languages, outlining the "three language formula" to be implemented in secondary education - the instruction of the English language, the official language of the state where the school was based, and Hindi.
 - The policy also encouraged the teaching of the ancient Sanskrit language, which was considered an essential part of India's culture and heritage.
- National Policy on Education, 1986:
 - This policy aimed at special emphasis on the removal of disparities and to equalise educational opportunity, especially for Indian women, Scheduled Tribes (ST) and the Scheduled Caste (SC) communities.
 - It launched "Operation Blackboard" to improve primary schools nationwide.
 - ► The policy expanded the Open University system with the Indira Gandhi National Open University, which had been created in 1985.
 - The policy called for the creation of the "rural university" model, based on the philosophy of

Mahatma Gandhi, to promote economic and social development at the grassroots level in rural India.

- Modification of 1986 National Policy on Education in 1992:
 - It aimed to conduct a common entrance examination on all India basis for admission to professional and technical programmes in the country.
 - For admission to Engineering and Architecture programmes, the government laid down a Three – Exam Scheme (JEE and AIEEE at the National Level and the State Level Engineering Entrance Examinations (SLEEE) for State Level Institutions).
 - This was done to take care of varying admission standards in these programmes and to maintain professional standards.
 - It also solved the problems of overlaps and reduced physical, mental and financial burden on students and their parents due to multiplicity of entrance examinations.

• ANALYSIS:

Key provisions of the draft of 2017:

- **Early childhood care and education**: Highquality early childhood care and education will be provided for all children between the ages of 3 and 6 by 2025. This will be done within institutions such as schools and anganwadis, which would have a mandate to take care of the overall well-being of the child—nutritional, health, and education.
- Ensuring foundational literacy and numeracy: Every student will start achieving age-appropriate foundational literacy and numeracy by 2025. A slew of programmes and measures have been articulated for this purpose.
- **Transformed curricular and pedagogical structure**: The curriculum and pedagogical structures will be designed anew, based on children's cognitive and socio-emotional development. The curriculum will be integrated and flexible with equal emphasis on all subjects and fields.

- Universal access and retention in schools: All children between ages 3 and 18 will be in school by 2030. The Right to Education Act will be extended from pre-school to class XII. Currently this is from 6-14 years of age.
- **Teachers at the centre:** The profession of teaching, and so teachers, will be at the centre of the education system, focused on the student and educational aims. All schools will be fully resourced with teachers—with working conditions for an energetic work culture.
- New institutional architecture for higher education: India's current 800 universities and over 40,000 colleges will be consolidated into about 10,000-15,000 institutions of excellence to drive improvement in quality and expansion of capacity. This architecture will have only large multi-disciplinary institutions, with significant investment.
- Three types of higher education institutions will be there: Type 1 universities focused on research but also teaching all programmes, undergrad to doctoral; Type 2 universities focused on teaching all programmes while also conducting research and; Type 3 colleges focused on teaching undergrad programmes. All types will grant their own degrees. There will be no system of university affiliations.
- High-quality liberal education: All undergraduate education will be broad-based liberal education that integrates the rigorous study of sciences, arts, humanities, mathematics and vocational and professional fields with choices offered to students. Multiple exit and entry points will be offered, with appropriate certification after one, two, three and four years of study. There will be a four-year undergraduate programme available in addition to three-year programmes.
- There will be a substantial increase in public investment to expand and vitalize public education at all levels.

Reasons behind introduction of these new provisions:

 A healthy mind resides in a healthy body. Hence for a child to learn something the first and foremost requirement is good health. He should be provided with complete nutrition. The institutions of school and anganwadi will provide this support to families for children younger than three years of age—within their homes.

- The basic issue facing our education system today is that students are not being able to read, write and do elementary math. Hence special emphasis was needed to be given for foundational literacy and basic numeracy.
- Until now the studies and the co-curricular activities (like – playing sports, dancing, painting, etc.) were treated differently and lesser emphasis was given to the co-curricular. But in this new draft, there will be no separation of curricular, co-curricular or extra-curricular areas in schools. Examination systems will be radically changed to assess real learning, make them stress-free, and aim for improvement instead of the passing of judgements.
- Earlier there were provisions of "temporary" teachers. This was causing a lesser dedication from the teachers towards teaching as they were fearful of their employment. Under this new draft no temporary teachers will be allowed.
- All positions of teachers will be filled with competent and qualified teachers. A developmentoriented performance management system will be put in place. The teacher education system will be transformed, with rigorous teacher preparation through a four-year integrated stage and subjectspecific programmes offered only in multidisciplinary institutions.
- Provision of liberal education at higher levels with imaginative and flexible curricula will help to develop critical thinking, creative abilities and other fundamental capacities in the students.

Way forward:

- It is recommended of doubling of public funding to 6% of the GDP and increasing overall public expenditure on education to 20% from the current 10%. This is desirable but does not appear to be feasible in the near future given that most of the additional funding has to come from the States. There should be involvement of private sector in implementing the schemes.
- Expanding coverage under the RTE Act to include pre-school children is extremely important, but should perhaps be introduced gradually, keeping in mind the quality of infrastructure and teacher vacancies.
- Language issues have to be handled sensitively in view of their emotional overtones, as witnessed recently. Further imposing a particular language should not be followed instead the mother language and regional ones should be promoted.

Practice Question

Bow does the new National Education Policy draft would address the inefficiencies prevalent in our education system and what else needs to be done?

CANCER

CONTEXT

- A recent study led by a group of researchers at the University of Texas MD Anderson Cancer Center has found that adding a drug, ribociclib, to hormone therapy significantly increased the overall survival in relatively younger women suffering from advanced breast cancer.
- Recently it is cited by researchers that an immunotherapy treatment helped significantly boost survival rates among patients suffering from advanced lung cancer.

• ABOUT:

What is Cancer?

- A disease in which abnormal cells divide uncontrollably and destroy body tissue.
- It can start almost anywhere in the human body, which is made up of trillions of cells. Normally, human cells grow and divide to form new cells as the body needs them. When cells grow old or become damaged, they die and new cells take their place.
- When cancer develops, this orderly process breaks down. As cells become more and more abnormal, old or damaged cells survive when they should die and new cells form when they are not needed. These extra cells can divide without stopping and forms tumors, which can spread through the blood or the lymph system and form new tumors far from the original tumor.

Difference between Cancer cells and Normal cells:

 Cancer cells are less specialized than normal cells. Whereas normal cells mature into very distinct cell types with specific functions, cancer cells do not. Unlike normal cells, cancer cells continue to divide without stopping.

When Cancer Spread:

• A cancer that has spread from the place where it first started to another place in the body is called **metastatic cancer**. The process by which cancer cells spread to other parts of the body is called **metastasis**.

Most common types of Cancer:

- Breast cancer: Cancer that forms in the cells of the breasts.
- Prostate cancer: Cancer in a man's prostate (small walnut-sized gland)
- ► **Basal cell cancer**: A type of skin cancer that begins in the basal cells.
- Melanoma: The most serious type of skin cancer.

- ► **Colon cancer**: A cancer of the colon or rectum, located at the digestive tract's lower end.
- Lung cancer: A cancer that begins in the lungs and most often occurs in people who smoke.
- Leukemia: A cancer of blood-forming tissues, hindering the body's ability to fight infection.
- ► **Lymphoma**: A cancer of the lymphatic system (the network of vessels through which lymph drains from the tissues into the blood).

Causes of Cancer

- Biological or internal factors, such as age, gender, inherited genetic defects and skin type.
- Environmental exposure, for instance to radon and UV radiation, and fine particulate matter.
- Occupational risk factors, like carcinogens such as chemicals, radioactive materials and asbestos.
- Lifestyle-related factors.

Cancer Detection and its treatment

- Its detection is based on biopsy and histopathological studies of the tissue and blood and bone marrow tests for increased cell counts in the case of leukemias.
- Techniques like radiography (use of X-rays), CT (computed tomography) and MRI (magnetic resonance imaging) are very useful to detect cancers of the internal organs.
- Antibodies against cancer-specific antigens are also used for detection of certain cancers.
- Techniques of molecular biology can be applied to detect genes in individuals with inherited susceptibility to certain cancers.
- While treating Cancer, body is robed off many vital nutrients. It is necessary to replenish those nutrients in the body to create conducive environment for better recovery.
- The common approaches for treatment of cancer are surgery, radiation therapy, chemotherapy and immunotherapy.
- Several chemotherapeutic drugs are used to kill cancerous cells. Some of these are specific for particular tumors. Majority of drugs have side effects like hair loss, anaemia, etc.

• ANALYSIS

Cancer in India

- Top most frequent cancers in men and women are breast, cervical, oral cavity, lung and colorectal. Breast cancer more aggressive and to be associated with poorer prognosis in younger women than in older women.
- According to WHO, it is the most frequent cancer among women, impacting 2.1 million women each year, and also causes the highest number of cancer-related deaths among women — 6,27,000 or 15% in 2018. In India, breast cancer accounts for 14% of all cancers in women.
- Besides, cancer is the second most common cause of death in India after heart disease. Use of tobacco products through cigarettes are the single most preventable cause of death worldwide.

Challenges in India

- In India, most cancer research is carried out in tertiary cancer centres and specialised institutions of biomedical science, against well-developed cancer research networks in high-income countries.
- The rising burden of cancer in India acts as a major drain on research time, particularly for clinical staff. According to estimates, there are only 2,000 cancer specialists in India for 10 million patients. Besides, infrastructure to support cancer research has a long way to go.
- Treatment of cancer is quite expensive and not every patient can afford it. The cost of the drug is around Rs. 50,000-60,000 per month and the duration varies from patient to patient.

Social and Emotional Side Effects of Cancer

- Loss of self-esteem and body image: Patients face scars, weight changes, the loss of a breast or other body part, or other changes to your body. Some parts of body might not work the way they used to.
- **Depression:** Depression affects about two in 10 people with cancer, according to the National Cancer Institute.
- Fear that cancer will return: It's normal to worry that every ache or sniffle could signal cancer's return, especially in the year after treatment. Medical appointments, anniversaries and other things can trigger or intensify these fears.
- Finding meaning: Over time, many patients find meaning and new beginnings in life after cancer. Some feel stronger or more capable. Some are inspired to try new things, and some find they savour each day more. New insights can develop slowly over years, however, and may not appear right away.
- **Grief:** It's common, even expected, to feel a sense of loss for your old life. Yet many patients are surprised by the intensity of emotions surrounding the need to adjust to a new normal.

- **Guilt:** Some people feel guilty about surviving, knowing that other patients didn't. Some worry that they burdened caregivers and family members. Counselling or a support group can offer the chance to talk through your feelings.
- **Relationships:** Cancer can strain relationships with friends, family and co-workers. People might treat you differently or not know what to say.
- **Spirituality:** Some survivors, finding a new connection and fellowship, renew spiritual practices. Others find themselves questioning their faith.
- **Stress:** The changes that come with cancer, treatment and survivorship can increase anxiety. Exercise, talking with others, relaxation techniques, meditation and creative activities can help.
- Work related: After cancer, re-entering social and professional life can be challenging. Many fear an increased risk of infection, lack of energy, and anxiety about work performance. At the same time, work can bring a sense of normalcy.

Economic Impact of Cancer

- The financial costs of cancer are high for both the person with cancer and for society as a whole. The Agency for Healthcare research and Quality (AHRQ) estimates that the direct medical costs (total of all health care costs) for cancer in the US in 2015 were \$80.2 billion.
- One of the major costs of cancer is cancer treatment. But lack of health insurance and other barriers to health care prevent many people from getting optimal health care.
- Uninsured patients and those from many ethnic minority groups are substantially more likely to be diagnosed with cancer at a later stage, when treatment can be more extensive, costlier, and less successful.

Index of Cancer Preparedness (ICP)

- Prepared by **Economist Intelligence Unit (EIU)**, created in 1946, is the research and analysis division of The Economist Group and the world leader in global business intelligence.
- The aims of the ICP are to allow benchmarking of national efforts and identify best practice in addressing the cancer challenges.
- India and ICP: India's overall rank is 19th with a score of 64.9. India ranks 17th in cancer policy and planning, but it has a relatively high score of 80.8.

Recent Initiatives taken by government

 National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) are being implemented under the National Health Mission (NHM). The primary components include awareness generation for cancer prevention, screening, early detection and referral to an appropriate institution for treatment.

- '**Tertiary Care for Cancer**' scheme was launched with primary purpose to set up individual units in every state.
- National Tobacco Control Programme is launched to create awareness about the dangerous effects of tobacco consumption, reduce the demand and supply of tobacco products.
- Rashtriya Arogya Nidhi (RAN) was launched to meet the financial demands for cancer treatment
- The recent finding of a drug for breast cancer patients will be able to extend the life duration. The drug has an advantage over chemotherapy and may have less side effects compared to standard treatment.

Way Forward

- Patients should pay attention to symptoms and get check-ups regularly.
- Advice persons who addicted to tobacco to avoid at any cost. Vaccines also help lower the cancer risk in human.
- Government should cap the prices of cancer medicines as these are very expensive.
- Finally, changes in diets can make big difference in cancer prevention. Eat organic and loading up with good dose antioxidants can help in prevention of cancer.

Practice Question

• 'Cancer is somatic; the suffering from it, psychic.' In light of this statement discuss how cancer is a dreaded disease and what steps have been taken in India against it?

GS SCORE

CONSTITUTIONAL AND LEGAL FRAMEWORK FOR CHILD PROTECTION IN INDIA

CONTEXT

- In a tragic accident, a new-born baby was charred to death reportedly due to the overheating of the incubator in a city-based hospital.
- Nineteen students were killed and dozens injured in a massive fire that broke out at a coaching centre in Surat.

• ABOUT:

- According to the country's Ministry of Women and Child Development, 242,938 children disappeared between 2012 and 2017. But according to TrackChild, a government database, nearly 237,040 went missing between 2012 and 2014 alone.
- Rapid pace of unplanned urbanization in the developing countries has resulted in a large proportion of children becoming homeless, leading to multiple children living on the streets.
- These factorial pointers are indicated towards growing indifferent attitude towards children' safety.
- This is unacceptable affairs of state not just on 'demographic dividend norms' but also on moral factors.
- Looks like acts such as POCSO are lacking teeth and rigorous implementation will.

• BACKGROUND:

- The Supreme Court in 2013, responding to a Bachpan Bachao Andolan's petition filed in 2012, had ruled that any case of missing children must be registered and investigated as a case of trafficking or abduction.
- Government data has revealed that the trial of pending cases of child sexual abuse will take over 50 years in some states to be completed, even if no further cases are registered.
- Will a child who was raped when she is 15 keep attending court hearings even when she is 70?
- This is a mockery of justice and political apathy. In this state of emergency, urgent political response is required.

• ANALYSIS

What is Child Protection?

• UNICEF considers child protection as the prevention of or responding to the incidence of abuse,

exploitation, violence and neglect of children. This includes commercial sexual exploitation, trafficking, child labour and harmful traditional practices, such as female genital mutilation/cutting and child marriage.

- Protection also allows children to have access to their other rights of survival, development, growth and participation.
- According to the Integrated Child Protection Scheme (ICPS) Child Protection is about keeping children safe from a risk or perceived risk to their lives or childhood.
- It is about recognizing that children are vulnerable and hence reducing their vulnerability by protecting them from harm and harmful situations.
- According to the United Nations Convention on the Rights of the Children – that India ratified in 1992 – all children are born with fundamental rights.
 - Right to Survival to life, health, nutrition, name, nationality
 - Right to Development to education, care, leisure, recreation, cultural activities
 - Right to Protection from exploitation, abuse, neglect
 - Right to Participation to expression, information, thought, religion

A Protective Environment for all Children

- This protective environment rests in 2 strategic pillars: strengthening of national systems and social change, which translate into the following 8 key strategies:
- Governmental commitment to fulfilling protection rights: includes social welfare policies, adequate budgets, public acknowledgement and ratification of international instruments.
- Legislation and enforcement: includes an adequate legislative framework, its consistent implementation, accountability and a lack of impunity.
- Attitudes, traditions, customs, behavior and practices: includes social norms and traditions that condemn injurious practices and support those that are protective.



 Open discussion, including the engagement of media and civil society: acknowledges silence as a major impediment to securing government commitment, supporting positive practices and ensuring the involvement of children and families.

- Children's life skills, knowledge and participation: includes children, both girls and boys, as actors in their own protection through use of knowledge of their protection rights and ways of avoiding and responding to risks.
- Capacity of those in contact with the child: includes the knowledge, motivation and support needed by families and by community members, teachers, health and social workers and police, in order to protect children.
- Basic and Targeted Services: includes the basic social services, health and education to which children have the right, without discrimination, and also specific services that help to prevent violence and exploitation, and provide care, support and reintegration assistance in situations of violence, abuse and separation.
- Monitoring and oversight: includes effective systems of monitoring such as data collection, and oversight of trends and responses.
- Keeping in view the problems and challenges faced by children, laws have been introduced and various policies and programmes are being implemented for the welfare of children in India.

Constitutional Safeguards for Children

- Article-15 & 15(1): The State shall prohibit discrimination against any citizen on the grounds of religion, race, caste, sex. Nothing in this article prevents the State from making any special provision for women and children.
- Article -21 A: The State shall provide free and compulsory education to all children of the age 6-14years in such manner as the State may, by law determine.
- Article-24: No child below the age of 14years shall be employed to work in any factory or mine or engaged in any other hazardous employment.
- Article-39(f): Enjoins the State to ensure that children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that the childhood and youth are protected against exploitation and against moral and material abandonment.
- **Article-45:** The State shall endeavor to provide early childhood care and education for all children until they complete the age of six years.
- Article-243 G: Provides for institutionalization of child care by seeking to entrust programmes of women and child development to Panchayat (item 25 of Schedule 11).

Legislations related to Children

- The **Hindu Adoptions and Maintenance Act**, **1956** codifies laws for adoption and maintenance of both boys and girls and declares that the sons and daughters are treated equally in the matter of succession.
- The **Pre-Conception and Prenatal Diagnostic Techniques Act, 1994** regulates the use of prenatal sex determination techniques. Though it permits the use of prenatal sex determination techniques for detecting chromosomal or sex linked disorders only by the registered institutions but strictly prohibits determination of sex of foetus and killing of female child in the mother's womb not only by the medical practitioners, gynecologists or pediatricians' but also by any genetic laboratory, counseling centre or clinic.
- The Immoral Trafficking (Prevention) Act (ITPA), 1956 prohibits commercial sexual exploitation and all cases relating to prostitution registered under the Act. This Act defines a minor as a person between 16 to 18 years of age.
- The Child Labour (Prohibition and Regulation) Act, 1986 prohibits the engagement of children in certain employments and regulates the conditions of work of children in certain other employments.
- The **Juvenile Justice Act** formulates laws relating to juveniles in conflict with law (juvenile who is alleged to have committed an offence) and provide proper care and protection for children in need. The Act adopts child-friendly approach by catering to the development needs of the children and their rehabilitation in institutions established under law.

Institutional Frameworks for Child Welfare

- The National Commission for Protection of Child Rights (NCPCR) was set up as a statutory body under Ministry of Women and Child Development in 2007 under the Commission for Protection of Child Rights (NCPCR) Act 2005 to protect, promote and defend child rights in the country.
- The Central Adoption Resource Authority (CARA) is an autonomous body under Ministry of Women and Child Development, Government of India. CARA which primarily deals with adoption of orphan, abandoned and surrendered children through recognized agencies.
- As per the provisions of Hague Convention on Inter-country Adoptions, 1993, CARA is designated as the Central Authority to deal with in-country and inter-country adoption of children.

What is the status of safety environment?

- When a generation of a nation is under siege by an enemy that resides within us, citizens must recognize the emergency and act on a war footing.
- With two-thirds of the population of a country living in a constant state of fear; it is a breakdown

of the rule of law. It is now that the idea of a New India that is a Safe India is timely, and necessary.

- When a child loses valuable years of education battling trauma from sexual abuse, his/her loss must be compensated for.
- Our current justice system for children does not take this into account. The tribunal shall provide for damages, attach property, reward compensation on the basis of natural justice; thus making injustice economically unviable for the perpetrator.
- Practice Question

- It will ensure prompt action and hold institutions accountable to their ultimate beneficiary, the child
- Parliament should set up a national children's tribunal as the immediate political response to this state of emergency.
- Justice is not a transactional principle in the courts, but an absolute principle to maintain equilibrium in society.
- Despite India having a comprehensive legal regime and policy framework to protect the rights and interests of the children, we still witness apathetic attitude towards children's safety. Discuss.



SECTION: B (PRELIMS)

CURRENT AFFAIRS

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EURASIAN RESOURCES AND CNMC FIRMS EYE VEDANTA'S ZAMBIA ARM

• Eurasian Resources and China Non-Ferrous Metals (or CNMC), which already have copper assets in Zambia and Congo, expressed their interest in buying Konkola Copper Mines (KCM), in case the Zambian government seizes it from Vedanta Resources Ltd.

- ABOUT:
- Zambia is Africa's second-largest copper producer and copper exports account for 70% of its total export earnings and 12.2% of its gross domestic product.
- According to Zambian government, "Many companies" are interested in taking over Konkola Copper Mines. Zambia, cash-strapped and struggling to contain debt, says that Vedanta hasn't met its investment promises and paid too little tax. The government has accused KCM of breaching its operating licence, while the company says it is a "loyal investor" that's spent more than \$3 billion in the country since 2004.
- Many mining operations do not yet pay tax on profits because they say they are still paying off capital expenditure, and the government is keen to increase its tax take.
- Eurasian Resources declined to be identified by name. CNMC also wanted to buy the assets. The Chinese company offered to spend \$2.5 billion on development.

КСМ

- KCM and its resources are at stake. It is one of the world's richest and wettest deposits, which stretch from Zambia's Copper-belt region into southern Democratic Republic of Congo.
- KCM's flagship operation is Konkola Deep with 140 Olympic-sized swimming pools worth of water having to be pumped to the surface daily. The ore bodies also contain cobalt, a prized metal that's used in rechargeable batteries that power mobile phones and electric cars.

Stand of Zambian Government

- Every government of the day has a right to run state-owned enterprises and a right to choose which countries and institutions to partner or work with.
- Article 90 of the Constitution of Zambia Amendment 2016 provides that the Executive authority derives from the people of Zambia, and should be exercised in a manner compatible with the principles of social justice and for the people's well-being and benefit. In exercise of the executive authority of the State, the ruling government is obliged to promote the rule of law, among other values and principles.
- In relation to the matter on hand, Government had several lawful options to divorce from Vedanta. Some options were direct while others were fronting.
- One direct option was Government would have taken over operations of KCM in line provisions of the Shareholders' Agreement. The Agreement stipulates steps that need to be taken to do so.
- The next direct option was invoking the Mines Development Act 2015 Licencing provisions. In this instance, the Ministry of Mines would have revoked KCM mining licence if there any breaches committed by KCM which violated the license conditions. The Mines Act stipulates steps that need to be taken to do so.
- The trouble with the case in hand is that instead of adopting a direct option, it instead adopted by a fronting option. But direct options were better in many ways than fronting option.

Breach of rights

• This is a breach of legal rights of Vedanta as attempted liquidation of KCM "can only hurt the country's hard-earned democracy and investor-friendly status."

Way Ahead

• Zambian government should rethink its strategy on the KCM liquidation/takeover. Rationality and rule of law should be cornerstones of such grand decisions in the interest of social justice and for the people's well-being and benefit. • By taking over some of the shuttered operations, the government of Zambia can run these operations for cash to meet its debt burden, but this is a short-term strategy because at some point there will be the requirement for further investment.

ANTHROPOCENE RECOGNISED AS AN EPOCH

• CONTEXT:

The pervasive and persistent signatures of modern human activity on the earth have been so striking that officially, it is being recognised and named as a new geologic epoch (Anthropocene).

• **Recently**, the Anthropocene Working Group (AWG) overwhelmingly voted to recognise Anthropocene as an epoch. The vote gives form to the efforts of scientists, notably the Nobel Laureate Paul Crutzen and Eugene F. Stoermer, who coined the term in 2000 to highlight how human activity had changed many facets of the earth.

Geochronology:

- Eon (largest)
- Era
- Period
- Epoch
- Age
- Chron (smallest)

Geological epoch:

- In geochronology, an epoch is a subdivision of the geologic timescale that is longer than an age but shorter than a period. The current epoch is the Holocene Epoch of the Quaternary Period.
- Cenozoic (current era)
 - Quaternary (current period)
 - Holocene (current epoch: The start of the Holocene epoch 11,700 years ago marks the end of the transition from the last glacial phase to a period of warming and a rise in sea level.)
 - Pleistocene
 - Neogene
 - Pliocene
 - Miocene
 - Paleogene
 - Oligocene
 - Eocene
 - ► Paleocene

Anthropocene:

- It is a proposed epoch dating from the commencement of significant human impact on Earth's geology and ecosystems.
- Human activity has been drastically changing the earth, with the greatest impacts coming from agriculture, large-scale deforestation, the industrial revolution and increase in atmospheric carbon dioxide, besides the creation of materials such as concrete and plastic.
- Unlike the others, it will be the first time that the beginning of an epoch would be based on human activity and not the consequences of changes brought about by nature.



Marker for this new epoch:

- Anthropocene Working group voted to look for unique signatures around the 1950s to define the start of the Anthropocene.
- To be chosen as a geologic marker, the golden spike must be present globally across most environments and must be a part of deposits for a geologically significant length of time.
- A decrease in deuterium excess, a proxy for climate change, owing to the reorganisation of North Atlantic Ocean-atmosphere circulation was a definitive geologic marker (or golden spike) to signify the base of Holocene.
- Now, radionuclides from atomic bomb tests from the early 1950s are emerging as a favourite golden spike candidate to define the base of the Anthropocene.

WORLD ENVIRONMENT DAY

• CONTEXT:

• Recently, World Environment Day is celebrated on 5th June and a new song Hawa Aane De is released by the Ministry of Environment, Forest and Climate Change for this day.

ABOUT: World Environment Day, 2019

- The theme for this year, set by the **United Nations Environment Programme**, is **Air Pollution**, a much-needed theme for awareness and action in India.
- The celebration of this day provides us with an opportunity to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in preserving and enhancing the environment.
- Since it began in 1974, it has grown to become a global platform for public outreach that is widely celebrated in more than 100 countries.

Why do we mark international days?

- International days are occasions to educate the public on issues of concern, to mobilize
 political will and resources to address global problems and to celebrate and reinforce
 achievements of humanity.
- The existence of international days predates the establishment of the United Nations, but the UN has embraced them as a powerful advocacy tool.

About the song:

- The theme song was launched by **Ministry of Environment, Forest & Climate Change (MoEFCC)**. The song is a call to action for all to come together to combat the environmental challenges of our time, urging each one of us to explore green technologies and measures to improve the quality of air and make the country and our cities less polluted.
- The Bhamla Foundation, an NGO working across many themes including health, child rehabilitation, woman empowerment & environment awareness, has collaborated with the Ministry on the song.
- Hawa Aane de song is the inclusion of the traffic police.
- The theme song is written by Shri Swanand Kirkire and sung by Shri Shantanu Mukherjee, Kapil Sharma, Sunidhi Chauhan and Shankar Mahadevan.

Other Initiatives

- MoEFCC recently launched the National Clean Air programme (NCAP) which is a mid-term 5 Year Action Plan with targets of 20-30% reduction of PM 2.5 and PM 10 concentration in 102 cities, out of which 84 cities have already submitted their action plan.
- The main objective of NCAP is to control and abate air pollution across the country. It is a multi-sectorial and collaborative approach with mainstreaming and integration.



Sources of Air Pollution:

- **Household** Indoor burning of fossil fuels, wood and other biomass-based fuels to cook, heat and light homes. Around 3.8 million premature deaths are caused by indoor air pollution each year, the vast majority of them in the developing world.
- **Industry** Energy production is a leading source of air pollution. Coal-burning power plants are a major contributor, while diesel generators are a growing concern in off-grid areas.
- **Transport** The global transport sector accounts for almost one-quarter of energyrelated carbon dioxide emissions and this proportion is rising. Transport emissions have been linked to nearly 400,000 premature deaths.
- **Agriculture** There are two major sources of air pollution from agriculture: livestock, which produces methane and ammonia, and the burning of agricultural waste. Around 24 % of all greenhouse gases emitted worldwide come agriculture, forestry and other land-use.
- **Waste** Open waste burning and organic waste in landfills release harmful dioxins, furans, methane, and black carbon into the atmosphere. Globally, an estimated 40 % of waste is openly burned.
- **Other sources** Not all air pollution comes from human activity. Volcanic eruptions, dust storms and other natural processes also cause problems. Sand and dust storms are particularly concerning.

CHRISTCHURCH CALL TO ACTION

• India has signed 'Christchurch Call to Action'.

• ABOUT:

Christchurch Call to Action

- It is a political call initiated by New Zealand Prime Minister Jacinda Ardern following the Christchurch mosque shootings of 15 March 2019 in which 50 Muslims were killed.
- The mosque attacks were livestreamed on the internet for nearly 17 minutes and showed distressing footage of the gunman firing indiscriminately at men, women and children. It was also shared extensively on a variety of internet platforms and uploaded again nearly as fast as it could be taken down.
- Thus, issued at a summit co-chaired by Ardern and President Emmanuel Macron of France, 'Christchurch Call' aims at stopping social media from being used to organize and promote terrorism.
- It is signed by the 18 signatory countries and 5 major tech companies (Amazon, Facebook, Google, Microsoft and Twitter).
- The US declined to issue the same terming it as antithetical to the American understanding of free expression.
- To uphold the pledge, signatory nations will adopt and enforce laws that will ban objectionable material, and set guidelines on how traditional media can report acts of terrorism without amplifying them.
- The companies agreed to accelerate research and information sharing with governments in the wake of recent terrorist attacks.
- The pledge, however, is non-binding.
- It would be up to each individual country and company to decide how it would honour its voluntary commitments.
- The meeting was held alongside the "Tech for Humanity" meeting of Group of Seven digital ministers, and France's separate "Tech for Good" summit.
- The disagreement over the Christchurch Call highlighted a long-standing tension between Europe, which has traditionally shown a greater willingness to rein in and regulate Internet firms, and the United States, where companies are given broad leeway to police themselves.



INDIA AS AN OBSERVER AT ARCTIC COUNCIL

• CONTEXT:

• Recently, at the Arctic Council ministerial meeting at Rovaniemi, Finland, India was re-elected as an Observer to the Arctic Council.

• ABOUT:

- India was first granted the Observer status in 2013, along with five other nations.
- As an Observer, India will not be allowed to take part in the active meetings but will participate in side events.
- China, South Korea, Singapore, Italy and Japan also have Observer status at the Council.
- At the meeting, chairmanship of the Council was passed from Finland to Iceland

Arctic Council

- Established through the **Ottawa Declaration of 1996**, it is an informal intergovernmental forum to promote cooperation in regulating the activities in the Arctic region.
- It consists of
 - Member nations: Eight nations that have territories in the Arctic, namely, Russia, the United States, Canada, Norway, Demark, Sweden, Iceland and Finland.
 - Permanent Participants: Six organisations representing the indigenous people of the Arctic region.
 - > Observers: Observer status in the Arctic Council is open to non-arctic states,
 - inter-governmental and inter-parliamentary organizations, global and regional, and
 - non-governmental organizations
- Through six working groups, each dealing with a specific subject, the Arctic Council seeks to evolve a consensus on the activities that can be carried out in the Arctic region in keeping with the overall objective of conserving the pristine environment, biodiversity, and the interests and well-being of the local populations.
- All decision-making happens through consensus between the eight members, and in consultation with the permanent participants.
- Currently, the U.S.A is planning to beef up its Arctic presence to keep Russia and China's aggressive behaviour in check in the region
- It is at approximately 66°30' N.
- Due to the Earth's inclination of about 23 1/2° to the vertical, it marks the southern limit of the area within which, for one day or more each year, the Sun does not set (about June 21) or rise (about December 21).
- The length of continuous day or night increases northward from one day on the Arctic Circle to six months at the North Pole.
- The Antarctic Circle is the southern counterpart of the Arctic Circle, where on any given date conditions of daylight or darkness are exactly opposite.
- The region has become an arena of global power and competition" owing to vast reserves of oil, gas, minerals and fish stocks.

Arctic and India

- India is one of the very few countries to set up a permanent station in the Arctic for the purposes of scientific research.
- The station has been used to carry out a variety of biological, glaciological and atmospheric and climate sciences research projects in the last one decade.



- The Himadri research station, located in Ny Alesund, Svalbard in Norway, about 1200 km south of the North Pole, was started in July 2008.
- The Goa-based National Centre for Antarctic and Ocean Research (NCOAR) is the nodal organisation coordinating the research activities at this station.

INDIA ELECTED TO INCB

ONTEXT • India's Jagjit Pavadia was re-elected to the UN's International Narcotics Control Board (INCB) with the highest margin. • ABOUT: Pavadia has been a member of the INCB since 2015. With current re-election, she will remain a member till 2025. Her win provides more global space, hence more clout. **International Narcotics Control Board** It is the independent and quasi-judicial monitoring body for the implementation of the United Nations international drug control conventions. It was established in 1968 in accordance with the Single Convention on Narcotic Drugs, 1961. It consists of 13 members who are elected by the ECOSOC. Each of the 13 members is elected for a five-year term and serves in their personal capacity, not as government representatives. It is headquartered in Vienna. It ensures adequate supplies of narcotics are available for medical and scientific purposes while combating their diversion as well as the illicit drugs manufacture and trafficking. It also publishes an annual report providing a comprehensive survey of the drug control situation in various parts of the world to ECOSOC through the Commission.

U.S. REITERATES THREAT OF SANCTIONS OVER TRIUMF DEAL

• • / /	
• CONTEXT:	• US made this clear that India should not assume that it will get a waiver from U.S. sanctions if it goes ahead with its purchase of the S-400 Triumf missile system from Russia. Further, Indo-U.S. defence relationship might also get affected.
• ABOUT:	 India had signed a \$5.4 billion deal to purchase five batteries of the Russian S-400 Triumf missile system, following a 2018 summit between Russian President and Indian Prime Minister in New Delhi.
	• The deal has run the risk of attracting sanctions from the U.S. under a 2017 law — the Countering America's Adversaries Through Sanctions Act (CAATSA).
	• When payments start being made for the S-400, the U.S. Congress's annual defence budget authorisation, the National Defence Authorisation Act (NDAA) passed last year (2018), allows the President to grant waivers from CAATSA sanctions under certain conditions.
	CAATSA
	 This came in the backdrop of Russia's military intervention in Ukraine and its alleged meddling in the 2016 US Presidential elections

GIS SCORE

- It aims to counter the aggression by Iran, Russia and North Korea through punitive measures.
- Title II of the Act deals with sanctions on Russian interests like its oil and gas industry, defence and security sector and financial institutions.
- The most stringent of these sanctions are:
 - The export licence restriction by which the US President is authorised to suspend export licences related to munitions, dual-use and nuclear related items.
 - The ban on American investment in equity/debt of the sanctioned person.

Specific Concerns of USA

- Several former U.S. defence officials have praised the military utility of Russian platforms like Brahmos cruise missiles and the S-400 system enabling India to face off against China. Some U.S. officials have remarked that purchasing the S-400 would prevent a deep and broad defence relationship with the U.S.
- The U.S. can't offer comparable anti-access/area denial capabilities.

• India is currently in discussions to buy various other U.S. defence equipment like the Sea Guardian drones and combat aircraft.

S-400 Triumf Missile System

- It is also known as the SA-21 Growler by the North Atlantic Treaty Organisation (NATO).
- It is capable of engaging aircraft, UAVs, cruise missiles and has a terminal ballistic missile defense capability.
- It is a mobile, surface-to-air missile system (SAM).
- It has an operational range of over 400 kms.

SOCIAL REFORMS BY VINAYAK DAMODAR SAVARKAR

• CONTEXT:

• 136th Anniversary of Vinayak Damodar Savarkar was celebrated recently on 28 May.

• ABOUT:

V D Savarkar:

- Vinayak Damodar Savarkar was commonly known as Veer Savarkar. He was a fearless freedom fighter, social reformer, writer, dramatist, poet, historian, political leader and philosopher.
- He was born in 1883 in Bhagur, a tiny village in district Nasik, Maharashtra.
- He went through 15 years of torturous imprisonment in Cellular jail of Andaman and Nicobar Islands for organising an armed revolt against the Morley-Minto reforms of 1909. After release from the jail, he focused on social reforms.

Social reforms:

- According to him, the Hindu society was bound by seven shackles (bandi) viz. prohibition
 of touch (sparshabandi) of certain castes, prohibition of inter-dining (rotibandi)
 with certain castes, prohibition of inter-caste marriages (betibandi), prohibition of
 pursuing certain occupations(vyavasayabandi), prohibition of seafaring (sindhubandi),
 prohibition of rites sanctioned by the Vedas (vedoktabandi), prohibition of reconversion
 (shuddhibandi) to the Hindu fold. He appealed to society to break these shackles.
- He was a strong critic of the caste system. He worked to ensure that children of lower castes attend school. He gave monetary incentives to their parents and distributed slate and chalk to children from these castes.
- He asked the government to abandon the title 'special schools for low caste children' as this title creates a feeling of inferiority among children attending the school.

- He would visit houses on festivals (like Dussehra and Makar Sakranti), accompanied by people from different castes, and distribute traditional sweets. He himself brought up a girl child from a former untouchable community and taught people from untouchable communities to read, write and recite the Gayatri mantra.
- He started the first pan-Hindu Ganeshotsav in 1930. The festival was marked by "kirtans" by the untouchables. Listeners from the higher castes would garland those who rendered these devotional songs. Public lectures by women and inter-caste dining by women were special features of these festivities.
- He wrote a song related to the entry of erstwhile untouchables into temples in 1931. It can be translated as "Let me see the idol of God, let me worship God."
- He supported many temple movements of Maharashtra, where the untouchables were encouraged to pray, recite Sanskrit hymns and conduct "abhishek" of the Vishnu idol.
- He started a café in 1933 for Hindus of all castes, including untouchables. He had employed a person from the Mahar caste to serve food there.

Political views on Hindu nationalism:

- In the brief period he spent at the Ratnagiri jail, Savarkar wrote his ideological treatise Hindutva: Who is a Hindu?
- In this work, he promotes a farsighted new vision of Hindu social and political consciousness. He began describing a "Hindu" as a patriotic inhabitant of Bharatavarsha, venturing beyond a religious identity.
- He defined Hindus as being neither Aryan nor Dravidian but as "People who live as children of a common motherland, adoring a common holyland."
- He described Hinduism, Jainism, Sikhism and Buddhism as one and the same. He outlined his vision of a "Hindu Rashtra" (Hindu Nation) as "Akhand Bharat" (United India), purportedly stretching across the entire Indian subcontinent.
- He argued that the holiest sites of Islam and Christianity are in the Middle East and not India, hence he stressed social and community unity between Hindus, Jains, Sikhs and Buddhists, to the exclusion of Muslims and Christians. He saw Muslims and Christians as "misfits" in the Indian civilization who could not truly be a part of the nation.

NIPAH VIRUS

• CONTEXT:

• The National Centre for Disease Control (NCDC) is investigating a sample from a man in Kerala who is suspected to be carrying the Nipah virus.

• ABOUT: Nipah Virus

- The virus can be transmitted to humans from animals (such as bats or pigs). The disease spreads through fruit bats or 'flying foxes,' of the genus Pteropus, who are natural reservoir hosts of the Nipah and Hendra viruses.
- Nipah virus infection is an emerging zoonotic disease of public health importance in the WHO South East Asia region with a high case fatality rate estimated to range between 40 and 75 per cent.
- It was first recognised in 1998-99 during an outbreak among pig farmers in Malaysia and Singapore.
- Human-to-human transmission of this virus has also been reported among family and care givers of infected patients.

How does Nipah spread or get transmitted?

- The virus is present in bat urine and potentially, bat faeces, saliva and birthing fluids.
- Furthermore, transmission between farms may be due to fomites or carrying the virus on clothing, equipment, boots, and vehicles.



Diagnosis

- Initial signs and symptoms of Nipah virus infection are nonspecific, and the diagnosis is often not suspected at the time of presentation.
- Nipah virus infection can be diagnosed with clinical history during the acute and convalescent phase of the disease.

Symptoms of Virus

• The incubation period of the virus is 7-14 days.

- Initial symptoms include fever, vomiting, sore throat, headaches and muscle pain.
- Nipah-case patients who had breathing difficulty are more likely than those without respiratory illness to transmit the virus.

Prevention and Treatment

- The infection can be prevented by avoiding exposure to bats in endemic areas and sick pigs.
- Drinking of raw palm sap (palm toddy) contaminated by bat excrete, eating of fruits partially consumed by bats and using water from wells infested by bats should be avoided.
- Bats are known to drink toddy that is collected in open containers, and occasionally urinate in it, which makes it contaminated with the virus.
- Culling of infected animals with close supervision of burial or incineration of carcasses
 – may be necessary to reduce the risk of transmission to people. Restricting or banning
 the movement of animals from infected farms to other areas can reduce the spread of
 the disease.
- Surveillance and awareness are important for preventing future outbreaks.
- There are currently no drugs or vaccines specific for Nipah virus infection although WHO has identified Nipah as a priority disease for the WHO Research and Development Blueprint. Intensive supportive care is recommended to treat severe respiratory and neurologic complications.
- It is important to practice standard infection control practices and proper barrier nursing techniques to avoid the spread of the infection from person to person.

PARTHENOGENESIS

• CONTEXT:

 Recently, the New England Aquarium in the US announced that a "virgin" anaconda had given birth during the winter. The aquarium does not have a male anaconda. Yet Anna, a green female anaconda, gave birth to a few babies, two of which have survived. In scientific terminology, it is known as parthenogenesis.

\odot **ABOUT**:

Parthenogenesis:

- The term parthenogenesis is an amalgam of the Greek words parthenos meaning virgin and genesis meaning origin.
- It is an asexual reproductive strategy that involves development of a female (rarely a male) gamete (a mature germ cell which is able to unite with another of the opposite sex in sexual reproduction to form a zygote) without its fertilisation.
- It occurs commonly among lower plants and invertebrate animals (particularly rotifers, aphids, ants, wasps and bees) and rarely among higher vertebrates.
- Many species that reproduce through parthenogenesis do not reproduce sexually. Others switch between the two modes taking cues from the environment.

Characteristics of Parthenogenesis:

- Babies born through parthenogenesis are clones of the mother. This was proved by this New England Aquarium through DNA tests.
- Parthenogenetic offspring tend to be clones of the parent because there has been no exchange and rearrangement of genetic information with another individual as happens in case of a sexual reproductive process.
- Stillbirth is common in parthenogenesis.

Mechanism of Parthenogenesis:

- Offspring of parthenogenic species develop from gametes. Gametes are reproductive cells that result from meiosis—in which a specialized cell with a (diploid) double set of chromosomes undergoes two fissions of its nucleus. Meiosis gives rise to four gametes, or sex cells, which are haploid—in that each possesses half the number of chromosomes of the original cell.
- Parthenogenesis can operate on either a haploid or a diploid cell. In haploid parthenogenesis, a rare form of parthenogenesis that occurs in a few species of bees, nematodes, and plants, offspring develop from haploid eggs to produce haploid adults.
- On the other hand, the process of diploid parthenogenesis, a more common and varied form of the phenomenon, may proceed along two pathways.
- Automixis (automictic parthenogenesis) is a postmeiotic process in which a haploid cell
 may either duplicate its chromosomes or join with another haploid cell. In both cases,
 diploid zygotes develop and grow into diploid adults. Such organisms are not true
 clones of the mother, however, because the meiotic process separates and recombines
 the genetic material.
- A second form of diploid parthenogenesis, apomixis (apomicitic parthenogenesis), forgoes complete meiosis altogether. Instead, two genetically identical diploid egg cells are produced from a parent cell through mitosis (the process of cell duplication), and one or more of these daughter cells, which are both diploid and clones (that is, genetically identical) of the original parent cell, develop into a diploid offspring.
- Diploid parthenogenesis occurs in insects such as aphids as well as in some rotifers and flowering plants.

E-CIGARETTES POSE PUBLIC HEALTH RISK

• CONTEXT:

- The Indian Council of Medical Research (ICMR) has warned of a potential public health disaster if action was not taken to completely prohibit and dissuade the use of Electronic Nicotine. Delivery Systems (ENDS) or e-cigarettes given that the nicotine delivered by these devices adversely affect almost all systems in a human body.
- Youth are using e-cigarettes (also known as vaping devices) at a rapidly increasing rate.

• ABOUT:

E-cigarette

- An electronic cigarette (or e-cig) is a battery-powered vaporizer that mimics tobacco smoking. It works by heating up a nicotine liquid, called "juice."
- E-cigarettes contain potentially harmful substances such as heavy metals like lead, volatile organic compounds and cancer-causing agents.
- Availability of flavour variants and attractive designs are adding to allure of devices and globally there was an increasing trend of e-cigarettes consumption among youth and adolescents.
- As e-cigarettes contain nicotine and not tobacco, they do not fall within the ambit of the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation



of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA), which mandates stringent health warnings on the packaging and advertisements of tobacco products.

Impact of E-cigarette

- It effects on humans include DNA damage; carcinogenesis; cellular, molecular and immunological toxicity; respiratory, cardiovascular and neurological disorders and adverse impact on foetal development and pregnancy.
- According to WHO report, nicotine itself is not a carcinogen, it may function as a "tumour promoter" and seems to be involved in the biology of malignant disease, as well as of neuro-degeneration.
- E-cigarettes also open a gateway for new tobacco addiction, which is a potential threat to the country's tobacco control laws and ongoing tobacco control programmes and efforts.

Main Concerns

- In India smoking devices are easily available through online shopping portals. Smart
 marketing and inadequate information on the nicotine content in e-cigarettes has
 created a false impression that these devices are not as harmful as regular cigarettes. In
 the absence of a regulation the use of e-cigarettes has grown; they are easily accessible
 to even the non-smokers.
- Along with the traditional cigarette manufacturing, there is a parallel industry of e-cigarette like devices growing in India, which is under-regulated.

Steps to be taken

- There are more than 460 different e-cigarette brands with varying configurations of nicotine delivery available in the market.
- The ICMR has recommended complete prohibition on ENDS or e-cigarettes in India in the greater interest of protecting public health.
- By bringing together all stakeholders under one umbrella to prevent this impending epidemic of e-cigarettes use.
- Advertising has been shown to promote a positive brand image for vaping devices and to spur youth to try them, while social media marketing has been linked to explosive growth in sales. Therefore, governments globally should promptly ban all e-cigarette advertising.
- Governments should also mandate plain packaging for vaping devices, ban their use wherever tobacco use is banned and strictly limit the accessibility of sales to youth – placing e-cigarettes behind the pharmacy counter.

Indian Council of Medical Research (ICMR)

- It is an apex body in India for the formulation, coordination and promotion of biomedical research and it is one of the oldest and largest medical research bodies in the world.
- It is funded by the Government of India through the **Department of Health Research, Ministry of Health and Family Welfare**.

WHO AWARD FOR RAJASTHAN HEALTH DEPARTMENT

• CONTEXT:

• The World Health Organization (WHO) has selected the Rajasthan government's Medical & Health Department, only government body in the country which will be awarded for its tobacco-free initiatives.



• ABOUT:	• The department's Additional Chief Secretary, Rohit Kumar Singh, received the award on World No Tobacco Day in New Delhi.			
	 The Medical & Health Department launched several campaigns against tobacco consumption at places such as schools, colleges, police stations and government offices during 2018-19. As part of the tobacco-free initiatives, 1.13 crore people took a pledge against tobacco consumption at the events held in 1.56 lakh government institutions on January 30 this year, marking Martyrs' Day. World No Tobacco Day 			
	 Every year, on 31 May, WHO and global partners celebrate World No Tobacco Day (WNTD). The annual campaign is an opportunity to raise awareness on the harmful and deadly effects of tobacco use and second-hand smoke exposure, and to discourage the use of tobacco in any form. The focus of World No Tobacco Day 2019 is on "tobacco and lung health". The campaign will increase awareness on: 			
				 The negative impact that tobacco has on people's lung health, from cancer to chronic respiratory disease,
		 The fundamental role lungs play for the health and well-being of all people. 		
	WHO			
	 WHO is a specialized agency of the United Nations that is concerned with international public health. It was established on 7 April 1948, and is headquartered in Geneva, Switzerland. The WHO is a member of the United Nations Development Group. WHO has selected five organisations from the South-East Asian region for this prestigious award. Three other organisations in the South-East Asian region have been selected from Thailand and Indonesia, while the Vallabhbhai Patel Chest Institute, New Delhi, is also among the recipients of the award. Way Ahead 			
				 As State government got international recognition so it would keep striving to accomplish the goal of a "healthy Rajasthan".
	LOUVRE PYRAMID			
• CONTEXT:	• IM Pei, whose modern designs and high-profile projects made him one of the best- known and most prolific architects of the 20th century, died at the age of 102.			
	• He was the focus of controversy when he designed a glass-and-steel Louvre Pyramid in Paris in 1980s.			
• ABOUT:	Louvre Pyramid:			
	• It is a large glass and steel pyramid which was designed by I. M. Pei. It is surrounded by three smaller pyramids, in the main courtyard of the Louvre Palace in Paris.			
	• This large pyramid serves as the main entrance to the Louvre Museum. It was completed in 1989 and has become a landmark of Paris.			
	• The pyramid and the underground lobby beneath it were created because of a series of problems with the Louvre's original main entrance, which could no longer handle the enormous number of visitors on an everyday basis. Visitors entering through the pyramid descend into the spacious lobby then ascend into the main Louvre buildings.			



What was the controversy?

- The construction of the pyramid triggered many years of strong and lively aesthetic and political debate. The criticisms were:
 - the modernist style of the edifice was inconsistent with the classic French Renaissance style and history of the Louvre;
 - the pyramid is an unsuitable symbol of death from ancient Egypt;

- the project was an immodest, pretentious, megalomaniacal folly imposed by then-President François Mitterrand; and
- Chinese-American architect I.M. Pei was insufficiently French to be entrusted with the task of updating the treasured Parisian landmark.

Who was IM Pei?

- Ieoh Ming Pei was a Chinese-American architect.
- He was born in Guangzhou in 1917. He left his homeland in 1935, moving to the US and studying architecture at the Massachusetts Institute of Technology and Harvard.
- After teaching and working for the US government, he went to work for a New York developer in 1948 and started his own firm in 1955.

His Legacy

- His first major recognition came with the Mesa Laboratory at the National Center for Atmospheric Research in Colorado in 1967. This led to his selection as chief architect for the John F. Kennedy Library in Massachusetts. He went on to design Dallas City Hall and the East Building of the National Gallery of Art.
- He returned to China for the first time in 1975 to design a hotel at Fragrant Hills, and designed Bank of China Tower, Hong Kong, a skyscraper in Hong Kong for the Bank of China.
- He later returned to the world of the arts by designing the Morton H. Meyerson Symphony Center in Dallas, the Miho Museum in Japan, MIHO Institute of Aesthetics, the Suzhou Museum in Suzhou, Museum of Islamic Art in Qatar, and the Grand Duke Jean Museum of Modern Art, in Luxembourg.
- Pei won AIA Gold Medal in 1979, the first Praemium Imperiale for Architecture in 1989, and the Lifetime Achievement Award from the Cooper-Hewitt, National Design Museum in 2003, **Pritzker Prize** (referred to as the Nobel Prize of architecture) in 1983.

ROMA COMMUNITY

• CONTEXT:

- Recently during his visit to Romania, Pope Francis apologised to the Roma people on behalf of the Catholic Church.
- He asked forgiveness for "all those times in history when we have discriminated, mistreated or looked askance at you".

• ABOUT:

Who are Roma people?

- They are an Indo-Aryan ethnic group which have come to Europe about 1,500 years ago from northern Indian subcontinent, from the Rajasthan, Haryana, and Punjab regions of modern-day India.
- Most of them live in southern and central Europe. The EU lists them as the largest ethnic minority in Europe.
- Some of them have emigrated to the US and Brazil in the 19th century. There are an estimated one million Roma in the United States and 800,000 in Brazil.

Discriminations faced by them

- One of the most enduring persecutions against the Romani people was their enslavement. Slavery was widely practiced in medieval Europe, including the territory of present-day Romania from before the founding of the principalities of Moldavia and Wallachia in the 13th–14th century. Legislation decreed that all the Romani living in these states, as well as any others who immigrated there, were classified as slaves.
- The persecution of the Romanies reached a peak during World War II in the Porajmos, the genocide perpetrated by the Nazis during the Holocaust. In 1935, the Nuremberg laws stripped the Romani people living in Nazi Germany of their citizenship, after which they were subjected to violence, imprisonment in concentration camps and later genocide in extermination camps.
- They were often killed on sight. The total number of victims has been estimated at between 220,000 and 1,500,000; even the lower figure would make the Porajmos one of the largest mass killings in history.
- In Czechoslovakia, they were labelled a "socially degraded stratum," and Romani women were sterilized as part of a state policy to reduce their population. This policy was implemented with large financial incentives, threats of denying future welfare payments, with misinformation, or after administering drugs.
- The Roma complain of housing and employment discrimination throughout Europe. They are associated with poverty, and are accused of high rates of crime and behaviours that are perceived by the rest of the population as being antisocial or inappropriate.

Global efforts for their upliftment

- World Romani Congress: It is a series of forum for discussion of issues relating to Roma people around the world with chief goals - standardization of the Romany language, improvements in civil rights and education, preservation of the Roma culture, reparations from World War II, and international recognition of the Roma as a national minority of Indian origin.
- **European Roma Rights Centre**: It is a Roma-led, international public interest law organisation engaging in a range of activities aimed at combating anti-Romani racism and human rights abuse of Romani.
- Gypsy Lore Society: It was founded in Great Britain in 1888 with goal of promotion of the study of Roma, Gypsies and Travelers. It is currently headquartered in US.
- **International Romani Union**: It is an organization active for the rights of the Romani people. Its seat is in Prague.
- **Decade of Roma Inclusion**: It was an initiative of 12 European countries to improve the socio-economic status and social inclusion of the Romani people across the region. The initiative was launched in 2005, with the project running from 2005 to 2015, and was the first multinational project in Europe to actively enhance the lives of Roma.
- **International Romani Day (8 April)**: It is a day to celebrate Romani culture and raise awareness of the issues facing Romani people.

SDG GENDER INDEX

CONTEXT:
 India ranked 95th out of a total 129 countries in the first-ever SDG Gender Index, which measures strides made in achieving gender commitments against internationally set targets.
 This SDG Gender Index comes close on the heels of the gender gap index of the World Economic Forum where India was ranked 108th.

• ABOUT:

SDG Gender Index:

• It is an index that measures the state of gender equality aligned to 14 of the 17 Sustainable Development Goals (SDGs) in 129 countries and 51 issues cover aspects



such as poverty, health, education, literacy, political representation and equality at the workplace.

It is developed by Equal Measures 2030 (EM2030) with joint efforts by regional and global
organisations like African Women's Development and Communication Network, AsianPacific Resource and Research Centre for Women, Bill and Melinda Gates Foundation,
and International Women's Health Coalition.

Significance of the Index:

- It provides a snapshot of where the world stands, right now, linked to the vision of gender equality set forth by the 2030 Agenda.
- Further, it provides for tools to support data-driven analysis and to hold governments accountable for gender equality in the context of the Sustainable Development Goals (SDGs).
- The overall index scores are based on a scale of 0–100. A score of 100 indicates the
 achievement of gender equality in relation to the underlying indicators. A score of 50
 would indicate that a country is about halfway to meeting its goal.

SCORE	CATEGORY
90 or above	Excellent
80-89	Good
70-79	Fair
60-69	Poor
59 and below	Very Poor

Highlights of the index report released:

- The index finds that no country has fully achieved the promise of gender equality and that the global average score of 65.7 out of 100 is "poor". This means that almost 1.4 billion, or 40%, of the world's girls and women live in countries failing on gender equality and another 1.4 billion live in countries that barely pass.
- Denmark, Finland, Sweden, Norway, Netherlands, Slovenia, Germany, Canada, Ireland, and Australia rank as the top 10 countries in the index.
- The bottom 10 countries comprise Sierra Leone, Liberia, Nigeria, Mali, Mauritania, Niger,
 Yemen, Congo, DR Congo and Chad.
- India's score of 56.2 means that it is among 43 countries that fall in the 'very poor' category.
- India scores the highest in health (79.9), followed by hunger and nutrition (76.2) and energy (71.8).
- Among the SDGs, on which our country performed poorly are seats held by women in the Supreme Court (18.2), partnerships (18.3), proportion of seats held by women in national parliaments (23.6), industry, infrastructure and innovation (38.1) and climate (43.4).



